



Dr. Saroj Shekhawat

Associate Professor, Biotechnology

CEO, GUIITAR Council

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Education

- ✚ Pursuing PG Diploma in Biotechnology Law and Policy (2023-24), Gujarat National Law University, Gandhinagar, Gujarat
- ✚ Postdoc (2007), Weizmann Institute of Science, Israel
- ✚ PhD (2006), Weizmann Institute of Science, Israel
- ✚ M.Sc. Biotechnology (1996) – Banasthali Vidyapith, Rajasthan B.Sc
- ✚ Biological Science (1994)- Maharani College, Jaipur, Rajasthan

Key Skills

Dr. Saroj Shekhawat is capable of providing consultations and comprehensive solutions to academics, industry and government bodies in the following areas:

1. Cancer and HIV research: in vitro and in vivo assays and high throughput screening of drug candidates
2. Mouse Cancer models, Animal Studies, in vivo, ADMET studies
3. Animal Tissue culture and Molecular Biology related projects and Techniques
4. Drug Designing & Discovery-in Silico approaches
5. Radiotherapy & Radiopharmaceuticals applications
6. Metagenomics, Bioremediation and Agri-Technology
7. National and State level Entrepreneurship ecosystem and policies

Professional Background

1. Associate Prof. (July 2023 Onwards), GSFC University, Vadodara, Gujarat
2. CEO GUIITAR Council -A section 8 Company (2020 Onwards), University, Vadodara, Gujarat
3. Assistant Prof. (2018-July2023), GSFC University, Vadodara, Gujarat
4. Trainer/Faculty(2017-18) Agility Centre for Education, Vadodara
5. Principle Scientist(2011-15), Stemgenics Therapeutics, Pune
6. Head of the Department (2009-10), Pharmaceutical Management, Assistant Prof. Biotechnology Management, MITCON Institute of Management Association (MIMA), Pune
7. Research Scientist(2008-2009) , National AIDS Research Institute, NARI, Pune
8. Post-Doctoral Fellow(2007), Weizmann Institute of Science, Israel
9. Project Fellow(2000-2001), Jawahar Lal Centre for Advanced Research(JNCASR), Bangalore
10. Junior Research Fellow (1997-1999), Institute of Nuclear Medicine & Allied Sciences INMAS, DRDO

Scholarship and Accomplishments

1. DBT Scholarship - M.Sc. Biotechnology
2. DRDO Fellowship-JRF at Institute of Nuclear Medicine and Allied Sciences
3. Doctoral fellowship-Feinberg Graduate School Weizmann Institute of Science, Israel
4. Post-Doctoral fellowship-Feinberg Graduate School, Weizmann Institute of Science, Israel
5. EMBO-YIP Travel Fellowship, Heidelberg, Germany
6. Elected foreign students representative for two consecutive terms at Weizmann Students Council. Weizmann Institute of Science, Israel.
7. Appointed CEO, GUIITAR Council, A section 8 Company
8. Awarded Strongest "Women of the University" by GSFC University.
9. Gold Medal in Shot-Put, 2023 Annual Sports Meet, GSFC University
10. First Prize, Badminton Mixed Doubles, GSFC University

Conference & Seminar

- **Invited** as Resource Person in GSBTM sponsored Intensive Crash Course organized by N-BT-CBC, Uka Tarsadia University on 27.12.2022
- Organized **International Workshop on "post-natal Stem Cells and Their applications in Regenerative medicine"** at GSFC University 09-11Feb2023
- Delivered a Lecture on "Stem Cell Bioengineering-Bioentrepreneurship Opportunities" at **International Workshop on "post-natal Stem Cells and Their applications in Regenerative medicine"** at GSFC University 11Feb2023
- **Invited speaker** GSBTM sponsored Workshop on "Bioprocess and Industrial

Biotechnology" organized by Parul University at 24th to 28th September, 2019. Delivered talk on "Small Molecule Drugs to Biopharmaceuticals-The Giant Leap!!"

- **Conducted** Two-day workshop for TATA CHEMICAL LIMITED, Pune on "Technology Pricing and Costing".
- **Invited speaker** for a UGC organized conference on "Technology Foresight in LifeSciences", 20-21Feb2010, at M.A. College, Aurangabad.
- **Panel Member** for "National Seminar on the Convergence of Law and Biotechnology" organized jointly by D.E.S. Law College and Ferguson College on 17-18 Feb 2010. Presented the paper "We can therefore, Should We?", the issues surrounding cloning and Stem Cell Research.
- **Organized International Conference** on "Pre-clinical Testing of Candidate Microbicides", 02-06 Feb 2009 at NARI, India. This was in collaboration with Harvard Medical School, USA, CONRAD, USA and King George's Medical School, UK and DBT-ICMR India.

Member of Professional Bodies

Member Institutional Biosafety Committee (IBSC) of CONCORD Biotech, Ahmedabad, Gujarat

Publication

1. Cancer Cachexia and breast cancer stem cell signalling – A crosstalk of signalling molecules, Cellular Signalling, PriyankaShivnani, Saroj Shekhawat, AkhileshPrajapati, 2023, 110847, ISSN 0898-6568, <https://doi.org/10.1016/j.cellsig.2023.110847IF: 4.8>

Industry Projects and Consultations

1. Principle Investigator: Bioremediation approaches using metagenomics method for the P-832 effluent of crude Caprolactam at GSFC Ltd. Rs. 1.2 Lacs
Funded by GSFC Ltd.
2. Team Member Industry-Academia Project: Establishment of commercial NPK Biofermenter Plant at GSFC Ltd. Project cost 60 Lakh Approx.

Funded by GSFC Ltd.

Project Mentor: SSIP2.0 funded project

1. Sugarcane Bagasse waste into fertilizer, Approved funding Rs. 1.54 lakhs
2. Synthesis of Nano-Fertilizer Blend using Organic waste for prolific plant growth, Approved funding Rs. 1.87 lakhs

DETAILED PROFESSIONAL SKETCH:

Dr. Saroj Shekhawat has an extensive research, industrial and entrepreneurial experience totalling up to 16 years which covers many domains such as Biotechnology, Pharma and academics.

During her research fellowship at **Institute of Nuclear Medicine and Allied Sciences (INMAS), DRDO**, she developed expertise in developing animal disease models, Radiotherapy and Animal Tissue culture. She also gained knowledge on radiopharmaceuticals and nuclear imaging for biomedical applications.

She worked as Project Fellow at JNC SAR, Bangalore with Dr. Maneesha Inamdar in the area of Cardiovascular Development-In Vivo and In vitro models.

Dr. Shekhawat received full **Feinberg Graduate fellowship** at **Weizmann Institute of Science, Israel (35th Position as Best Research Institute in world ranking)** after clearing Weizmann Committee PhD project interview with flying colour. Her doctoral work focused on the structure of the Nuclear Pore Complexes (NPCs), its ability to discriminate between tagged and non-tagged macromolecular cargo, and its ability to support passive diffusion of small molecules along with facilitated, receptor-mediated macromolecular transport. In addition, she helped construct a model explaining how NPCs are able to maintain extensive bi-directional fluxes of macromolecules and macromolecular complexes without experiencing debilitating traffic jams. Her gene silencing work implicated transport players to cancer development.

Dr. Shekhawat was offered **Postdoctoral Fellowship** in the same lab to pursue the roles of Ran-binding factors in the mitotic control to understand cancer development and progression. The work carried out trained her in Bioinformatics, Genetic Engineering, Analytical and Molecular Biology techniques.

Dr. Shekhawat joined **National AIDS research Institute (NARI), Bhosari Pune** as a Research Scientist where she designed and optimised HIGH THROUGHPUT ASSAY for the screening of Anti-HIV compounds from indigenous plants. She developed **in vitro HIV-models** for drug Screening and testing of Indigenous formulations. While Working at NARI, Dr. Shekhawat also helped in organizing an **International Workshop** with CONRAD, USA, Kings College, London and ICMR, Delhi on **CERVICAL EXPLANTS for HIV studies**.

Dr. Shekhawat shifted to academics to spend more time with her children. She worked as **Head of the Department, Pharmaceutical Management and Asst. Prof. Biotechnology Management at MITCON Institute of Management, Pune**.

Dr. Shekhawat shifted to Pharma Industry-Stemgenic Therapeutics, Pune as a **Principal Scientist** and handled R&D projects leading to their successful execution.

Dr. Shekhawat is currently working as an **Associate Professor- Biotechnology** in GSFC University where she is involved in teaching and supervising students in industrial and entrepreneurship projects. Along with the teaching, Dr. Saroj Shekhawat is also holding the position of the **CEO, GUIITAR Council-** A section 8 company, where she is responsible for developing the entrepreneurial and start-up ecosystem in the university and work with state and national agencies to implement various Govt. policies.

She teaches Emerging Technology, Genetic Engineering, Bioprocess Engineering and Technology, Genomics & Proteomics and has guided many students at undergraduate, Graduate level for their project work and industrial internship at GSFC University.

She is currently also guiding a PhD student working in the area of diabetes.

She is also an invited speaker at many **National and International seminars and Workshops** and has also participated in poster/oral presentations in various international conferences and seminars.

Dr. Saroj Shekhawat is also mentoring a project by students on Biofertilizer, Nano fertilizer and Biofuels under GSFC University Innovation Incubation Technology Applied Research Centre (GUIITAR) council. The projects have received **SSIP 1.0 and 2.0** funding of 1.5Lac and 1.85lac respectively.

Dr. Shekhawat is also a member of Institutional Biosafety committee (IBSC) at CONCORD Biotech. Ltd. to ensure compliance with all the rules mentioned in the Regulations & Guidelines For recombinant DNA Research & Biocontainment, 2017 and Guidelines & Handbook for Institutional Biosafety Committee (IBSC), 2011, and as modified time to time by Government of India

